

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-9 are pending in this application. Claims 1, 5, 8, and 9 were rejected under 35 U.S.C. §102(b) as anticipated by JP 2000-011453 to Kashiwagi. Claims 5, 6, and 9 were rejected under 35 U.S.C. §102(b) as unpatentable over U.S. patent 6,125,101 to Kikukawa et al. (herein "Kikukawa"). Claims 1, 2, 5, 8, and 9 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. patent 6,385,162 to Nagase et al. (herein "Nagase"). Claim 3 was rejected under 35 U.S.C. §103(a) as unpatentable over Nagase or Kashiwagi in view of Kikukawa. Claims 4 and 7 were objected to as dependent upon rejected base claims, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claim and any intervening claims.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter in claims 4 and 7.

Addressing now the rejection of claims 1, 5, 8, and 9 under 35 U.S.C. §102(b) as anticipated by Kashiwagi, that rejection is traversed by the present response.

Independent claims 1 and 5 are amended by the present response to clarify features recited therein. Specifically, those claims clarify that the groove recording mode is a recording mode "in which only grooves serve as a recording track". That subject matter is fully supported by the original specification for example at page 4, lines 2-12.

Applicants respectfully submit the claims as currently written distinguish over the applied art to Kashiwagi.

Kashiwagi discloses an optical recording medium including both grooves and lands. However, applicants note the way Kashiwagi utilizes the term grooves and lands differs from that in the present invention. More specifically, the grooves of Kashiwagi correspond to

lands in the present invention and the lands of Kashiwagi correspond to grooves of the present invention.

The present application notes at page 4, lines 13-24 an optical recording medium including grooves 2G and lands 2L. As noted in that portion of the present specification the grooves 2G are regions located relatively closer to laser incident surface, whereas the lands 2L are regions located relatively more remote from the laser incident surface. In contrast to such definitions in the present invention Kashiwagi defines grooves and lands such that the grooves 13 are regions located more remotely from the laser incident surface, whereas in Kashiwagi the lands are regions located relatively closer to the laser incident surface. Thus, Kashiwagi does not even utilize the same terminology referring to lands and grooves as in the present invention.

Moreover, applicants note Kashiwagi does not even refer to a groove recording mode in which *only grooves serve as a recording track*. Applicants note the basis for the outstanding rejection has not cited any portion in Kashiwagi indicating operation in such a “groove recording mode, in which only grooves serve as a recording track”. Applicants respectfully submit that is the case because Kashiwagi is not directed to such a groove recording mode.

Moreover, applicants respectfully submit Kashiwagi does not disclose or suggest a preferred range of a track pitch P_T . One benefit realized in the present invention with the claimed track pitch P_T , based on discoveries by the present inventors, is the present invention can significantly reduce cross-erasing by employing a groove recording mode with certain conditions met corresponding to the pitch P_T .

Kashiwagi does not even address a preferred range of the track pitch P_T , and thus Kashiwagi does not even address reducing cross-erasing in a groove recording mode.

In such ways, applicants respectfully submit each of independent claims 1 and 5, and the claims dependent therefrom, patentably distinguish over Kashiwagi.

Addressing now the rejection of claims 5, 6, and 9 under 35 U.S.C. §102(b) as anticipated by Kikukawa, that rejection is also traversed by the present response.

Kikukawa discloses that grooves can be used for a recording track, for example in Example 1 of Kikukawa, and as noted in Kikukawa at column 5, lines 47-49. However, in that respect Kikukawa discloses that in the device therein the affects achieved are not significantly different whether the area used for the recording tracks is the grooves or the lands.¹

In that respect applicants note the present inventors recognized different features than as in Kikukawa. As noted above, the present inventors recognized that cross-erasing can be reduced by employing a groove recording mode rather than land/groove recording mode with certain conditions of a track pitch P_T being met. Clearly Kikukawa does not address such features as Kikukawa recognizes that in the device therein different affects are not achieved in a groove or land recording mode.

The outstanding Office Action also cites Kikukawa to disclose the use of recording in grooves under the condition $P_T/(\lambda/NA)=0.655$ on the assumption that a laser beam having a wavelength of 680 nm and an objective lens having a numerical aperture of 0.6 are used for recording data in an optical recoding medium having a recording track pitch ($Gw+Lw$) of 0.74 μm . However, applicants respectfully submit Kikukawa does not in fact disclose such combinations of factors; that is, the outstanding rejection is taking isolated teachings within Kikukawa and applying them in a manner that Kikukawa does not indicate.

Kikukawa indicates the wavelength λ of a laser beam is preferably equal to or shorter than 680 nm when high-density recording is desirable and the numerical aperture NA is

¹ Kikukawa at column 5, lines 47-49.

preferably equal to or larger than 0.6 when high-density recording is desirable.² However, with respect to such high-density recording Kikukawa does not identify utilizing the recording track pitch ($Gw+Lw$). The indication of the track pitch ($Gw+Lw$) is identified only in Example 1 of Kikukawa, which is not the high-density recording. Thereby, applicants respectfully submit one of ordinary skill in the art would not understand from the description in Kikukawa at column 6, line 65 to column 6, line 5 that $P_T/(\lambda/NA)$ is set to 0.655 in Kikukawa.

Moreover, applicants note Kikukawa is also silent with respect to the recognized benefit in the present invention of being able to reduce cross-erasing in a groove recording mode by controlling the value of P_T .

In such ways, applicants respectfully submit independent claim 5, and the claims dependent therefrom, patentably distinguish over Kikukawa.

Addressing now the rejection of claims 1, 2, 5, 8, and 9 under 35 U.S.C. §102(e) as anticipated by Nagase, that rejection is traversed by the present response.

Nagase discloses at column 7, line 66 to column 8, line 16 that grooves are formed on a substrate. However, Nagase does not indicate whether information is recorded on lands or grooves, and in fact Nagase does not provide any indication of recording being carried out in a groove recording mode. Applicants also note the outstanding Office Action has not pointed to any disclosure in Nagase that actually discloses recording in a groove recording mode.

Moreover, applicants note Nagase does not disclose maintaining a preferred range of the track pitch P_T .

Nagase itself is also silent with respect to achieving the benefits in the present invention of reducing cross-erasing in a groove recording mode.

² Kikukawa at column 5, line 65 to column 6, line 5

In such ways, applicants respectfully submit independent claims 1 and 5, and the claims dependent therefrom, also distinguish over the applied art to Nagase.


Addressing now the rejection of claim 3 under 35 U.S.C. §103(a) as unpatentable over Nagase or Kashiwagi in view of Kikukawa, that rejection is also traversed by the present response.

The deficiencies of each of Nagase, Kashiwagi, and Kikukawa were discussed above, and applicants respectfully submit that in view of the above-discussed deficiencies in the applied art claim 3 also distinguishes over the combination of the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorneys of Record

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)
SNS/rac

I:\ATTYSNS\21's\214861\214861US-AF.DOC